

## LAUREN M. TOM

Ecology Department, Earth Sciences Division  
 Lawrence Berkeley National Laboratory  
 1 Cyclotron Road, MS 70A-3317  
 Berkeley, CA 94720

Phone: (510) 486-5884  
 Email: ltom@lbl.gov

### **EDUCATION:**

#### **University of California, Los Angeles**

Bachelor of Science with College and Departmental Honors  
 Major: Ecology, Behavior, and Evolution

2004-2008

### **EXPERIENCE:**

#### **Senior Research Associate**

LAWRENCE BERKELEY NATIONAL LABORATORY, Berkeley, California

2011-Present

- Worked in assistance with others to set up and carrying out experiments specific to PhyloChip DNA microarray analysis.
- Took charge of specific projects and lab tasks as the primary responsible individual.
- Responsible for preliminary data analysis using statistical programs Primer-E and R.

#### **Research Associate**

LAWRENCE BERKELEY NATIONAL LABORATORY, Berkeley, California

2008-2011

- Responsible for the identification of bacteria and archaea from environmental samples using the PhyloChip DNA microarray.
- Laboratory techniques include advanced DNA and RNA extraction, PCR optimization, and microarray hybridization and analysis.

#### **Field Researcher**

2007

MPALA RESEARCH CENTRE, Laikipia, Kenya

- Designed and implemented an outdoor field experiment to study heterospecific eavesdropping in a miniature antelope (*Madoqua guentheri*).
- Recorded bird alarm calls, broadcast recordings to miniature antelope, monitored behavioral changes, and analyzed data.
- Upon encouragement from a professor, published findings in Behavioral Ecology.

#### **Research Assistant**

2007

CHILDREN'S HOSPITAL OAKLAND RESEARCH INSTITUTE, Oakland, California

- Worked independently on a laboratory study on the birth defect gastroschisis.
- Amplified blood samples using PCR and genotyped blood samples using gel electrophoresis.
- Responsible for data management and interpretation.

### **PUBLICATIONS:**

- Kellogg, C.A., Y.M. Piceno, **L.M. Tom**, T.Z. DeSantis, M.A. Gray, D.G. Zawada, and G.L. Andersen. 2013. Comparing Bacterial Community Composition between Healthy and White Plague-Like Disease States in *Orbicella annularis* Using PhyloChip™ G3 Microarrays. PLoS ONE. 8 (11) pp. e79801. DOI: 10.1371/journal.pone.0079801.
- Briggs, B.R., E.L. Brodie, **L.M. Tom**, H. Dong, H. Jiang, Q. Huang, S. Wang, W. Hou, G. Wu, L. Huang, B.P. Hedlund, C. Zhang, P. Dijkstra, B.A. Hungate. 2013. Seasonal patterns in microbial communities inhabiting the hot springs of Tengchong, Yunnan Province, China. Environmental Microbiology. DOI: 10.1111/1462-2920.12311.
- Mello, A., G-C. Ding, Y.M. Piceno., C. Napoli, **L.M. Tom**, T.Z. DeSantis, G.L. Andersen, K. Smalla, P. Bonfante. 2013. Truffle Brûlés Have an Impact on the Diversity of Soil Bacterial Communities. PLoS ONE. 8 (4) pp. e61945. DOI: 10.1371/journal.pone.0061945.s007.
- Korves, T.M., Y.M. Piceno, **L.M. Tom**, T.Z. DeSantis, B.W. Jones, G.L. Andersen and G.M. Hwang. 2013. Bacterial communities in commercial aircraft high-efficiency particulate air (HEPA) filters assessed by PhyloChip analysis. Indoor Air. 23 (1): 50-61. DOI: 10.1111/j.1600-0668.2012.00787.x.

- Beazley, M.J., R.J. Martinez, S. Rajan, J. Powell, Y.M. Piceno, **L.M. Tom**, G.L. Andersen, T.C. Hazen, J.D. Van Nostrand, J. Zhou, B. Mortazavi and P.A. Sobeky. 2012. Microbial community analysis of a coastal salt marsh affected by the *Deepwater Horizon* Oil Spill. *PLoS One.* 7 (7): e41305. DOI: 10.1371/journal.pone.0041305.
- Mason O.U., T.C. Hazen, S. Borglin, P.S.G. Chain, E.A. Dubinsky, J.L. Fortney, J. Han, H-Y.N. Holman, J. Hultman, R. Lamendella, R. Mackelprang, S. Malfatti, **L.M. Tom**, S.G. Tringe, T. Woyke, J. Zhou, E.M. Rubin and J.K. Jansson. 2012. Metagenome, metatranscriptome and single-cell sequencing reveal microbial response to Deepwater Horizon oil spill. *ISME Journal.* 6 (9): 1715-27. DOI: 10.1038/ismej.2012.59.
- De Jesús-Laboy, K.M., F. Godoy-Vitorino, Y.M. Piceno, **L.M. Tom**, I.G. Pantoja-Feliciano, M.J. Rivera-Rivera, G.L. Andersen, and M.G. Domínguez-Bello. 2012. Comparison of the fecal microbiota in feral and domestic goats. *Genes.* 3 (1): 1-18. DOI: 10.3390/genes3010001.
- Kellogg, C.A., Y.M. Piceno, **L.M. Tom**, T.Z. DeSantis, D.G. Zawada, and G.L. Andersen. 2012. PhyloChip microarray comparison of sampling methods used for coral microbial ecology. *Journal of Microbiological Methods.* 88 (1): 103-109. DOI: 10.1016/j.mimet.2011.10.019.
- DeAngelis, K.M., C.H. Wu, H.R. Beller, E.L. Brodie, R. Chakraborty, T.Z. DeSantis, J.L. Fortney, T.C. Hazen, S.R. Osman, M.E. Singer, **L.M. Tom**, and G.L. Andersen. 2011. PCR amplification-independent methods for detection of microbial communities by the high-density microarray PhyloChip. *Applied and Environmental Microbiology.* 77 (18): 6313-6322. DOI: 10.1128/AEM.05262-11.
- García-Amado, M.A., F. Godoy-Vitorino, Y.M. Piceno, **L.M. Tom**, G.L. Andersen, E.A. Herrera, M.G. Domínguez-Bello. 2011. Bacteria diversity in the cecum of the world's largest living rodent (*Hydrochoerus hydrochaeris*). *Microbial Ecology Journal.* 63 (4): 719-725. DOI: 10.1007/s00248-011-9963-z.
- Lu, Z., Y. Deng, J.D. Van Nostrand, Z. He, J. Voordeckers, A. Zhou, Y-J. Lee, O.U. Mason, E.A. Dubinsky, K.L. Chavarria, **L.M. Tom**, J.L. Fortney, R. Lamendella, J.K. Jansson, P. D'haeseleer, T.C. Hazen, and J. Zhou. 2011. Microbial gene functions enriched in the Deepwater Horizon deep-sea oil plume. *ISME Journal.* 6 (2): 451-60. DOI: 10.1038/ismej.2011.91.
- Chourey, K., J. Jansson, N. VerBerkmoes, M. Shah, K. Chavarria, **L. Tom**, E. Brodie, and R. Hettich. 2010. Direct cellular lysis/protein extraction protocol for soil metaproteomics. *Journal of Proteome Research.* 9 (12): 6615-6622. DOI: 10.1021/pr100787q.
- Hazen, T.C., E.A. Dubinsky, T.Z. DeSantis, G.L. Andersen, Y.M. Piceno, N. Singh, J.K. Jansson, A. Probst, S.E. Borglin, J.L. Fortney, W.T. Stringfellow, M. Bill, M.E. Conrad, **L.M. Tom**, K.L. Chavarria, T.R. Alusi, R. Lamendella, D.C. Joyner, C. Spier, J. Baelum, M. Auer, M.L. Zemla, R. Chakraborty, E.L. Sonnenthal, P. D'haeseleer, H-Y.N. Holman, S. Osman, Z. Lu, J.D. Van Nostrand, Y. Deng, J. Zhou, and O.U. Mason. 2010. Deep-sea oil plume enriches indigenous oil-degrading bacteria. *Science.* 330 (6001): 204–208. DOI: 10.1126/science.1195979.
- Lea A.J., J.P. Barrera, **L.M. Tom**, D.T. Blumstein. 2008. Heterospecific eavesdropping in a nonsocial species. *Behavioral Ecology.* 19 (5): 1041-1046. DOI:10.1093/beheco/arn064.
- Lammer E.J., D.M., Iovannisci, **L. Tom**, K. Schultz, G.M. Shaw. 2008. Gastroschisis: A gene-environment model involving the VEGF-NOS3 pathway. *American Journal of Medical Genetics Part C (Seminars in Medical Genetics).* 148C (3): 213-218. DOI: 10.1002/ajmg.c.30182.